

2013

Facilitator Guide

Prepared By: Gabe Donaldson



[MUDD FIRE STAFF RIDE AUGUST 23RD, 2006]

Mudd Fire Staff Ride

Outline:

0830-0845: *Introductions*

0845-0930: *Mudd Fire Summary, Outline, Pre-Mortem and PowerPoint*

0830-0930: *Travel to the “Adobe Summit and Point of Origin” / **Stand #1***

1030-1130: *Travel to the “The Snow-Bowl Y and Division Delta” / **Stand #2***

1130-1300: *Travel to the “Seismic Station Road and the Entrapment” / **Stand #3** / Hike to deployment site from seismic towers (~3/4 miles roundtrip)*

1300-1400: *Travel back to Elko/ AAR/ Lessons Learned/Integration*

Acknowledgments:

The Mudd Fire Staff Ride is the collective effort of the Elko District Fire and Aviation Program, including Gabriel Donaldson, Brian Deck, Dylan Rader, Craig Cunningham and Glen Uhlig. We would also like to acknowledge and thank those who contributed to the accident investigation and report.

Facilitator Guide Pre-Work, Expectations, and Leader’s Intent:

The Facilitator guide augments the Participant Guide as a tool to steer participants towards discussion in the context of strategy, tactics and high reliability organizing contrasted against the events that unfolded during the Mudd Fire and consequent deployment. The Facilitator Guide has many suggested question and discussion points in it, but these questions should not limit participants or facilitators.

It is incumbent upon facilitators to be familiar with the investigation report, factual report and any other information provided in the Mudd Fire Staff Ride SharePoint and on the Lessons Learned Website. Facilitators should be confident in discussing the strategy and tactics of the incident in an objective fashion without placing blame or recalling errors unconstructively. Facilitators should try to contrast the principles of high reliability organizing against contemporary firefighting and organizational risk management practices. Finally, it is an expectation that Facilitator’s be open and amenable to all comments and thoughts, while keeping the Staff Ride targeted towards constructive discussion.

At the conclusion of the Staff Ride, participants and facilitators should have a broader understanding of events that aligned to result in the deployment at Stand #3, as practiced through the “Situational Awareness Workbook”, tactical decision games and strategic talking points. An AAR or PLOWS should be conducted at the end of each Stand and at the end of the Staff Ride in order to offer closure to each portion of the exercise.

Mudd Fire Staff Ride

Introduction and Context:

Northern Nevada was experiencing a record breaking fire season in 2006 with resources from throughout the nation either responding to incidents or staging in the Elko area. The Mudd fire started on August 23, 2006 at approximately 14:59 PST from diesel exhaust just northwest of Adobe Summit on state route 225. Interagency suppression forces were dispatched to the reported fire, 10 miles North of Elko, NV along State Route 225. Rapid fire growth and rugged topography dictated the need for several access routes into the emerging incident. With ground resources rendezvousing at different points around the fire, coordination of suppression tactics became increasingly difficult and some communication channels were either compromised or non-existent. The conditions and events that occurred during the Initial Attack phase of the Mudd Fire would, in the end, lead to a fire entrapment situation.

It is the hope that participants will have a broader understanding of the events leading up to the entrapment by walking through the Nevada fire situation, the events surrounding the choice to engage, the organization on the fire and division Delta and the events that led to the entrapment. It is the intent of this staff ride to explore all aspects of the decision making and risk management process as well as ask questions that aid in the development of every participant as firefighters. The [Accident Investigation Factual Report](#) and the [Management Evaluation Report](#) both serve as outstanding references and tools for understanding the specifics of the event (s), but there is also a great deal of value in seeing the terrain first hand, and understanding the position of the responding resources, leaders, managers and administrators.

Finally, it is the hope that participants and facilitators alike can apply and study many of the principles of High Reliability Organizing in order to contrast past and contemporary approaches to risk management.

Mudd Fire Staff Ride

Introduction: “2006 Fire Season Overview and Entrapment Situational Analysis”

Leader’s Intent: Through a PowerPoint presentation participants will have a broad understanding and frame of the Nevada fire situation in August, 2006 as well as the response and scope of the Mudd fire.

Location: Hotshot Training Room or Elko Interagency Dispatch Center

Logistics: *This stand should be done where there is access to both a computer and projector with screen. Depending on class size a large area at the Elko District Office may need to be reserved. After Stand #1 is complete, drive to Stand #1 via Mountain City Highway to give participants a frame of reference.*

Summary: The introduction will give a broad overview of Elko District’s fire activity, fuel and weather conditions encountered during the 2006 fire season as a prelude to the actual conditions observed on August 23, 2006. A PowerPoint presentation will include a thorough breakdown of the initial attack phase, evolving chain of command & complexity, communications, suppression forces locations and key decisions and events leading up to the Mudd Fire entrapment. Discussion of applicable Standard Fire Fighting Orders, LCES, and Watch Out Situations will follow presentations. Participants should have a full understanding of the scenario before travelling to the subsequent stands.

Stand #1: “2006 Fire Season Overview and Entrapment Situational Analysis”: Tactical Decision Games (TDGS)

1. What information would you be seeking as a single resource boss responding to this incident?
2. What information would you be seeking as a Duty Officer, in order to effectively engage the fire with local resources?
3. What other considerations would you take, or questions would you address prior to traveling to the incident?

Stand #1: “2006 Fire Season Overview and Entrapment Situational Analysis”: Strategic Discussion Points (SDPS)

1. Given the current fuel conditions and forecasted weather, what actions would you employ to mitigate anticipated risks?
2. If you were in a supervisory position what additional information would you deem needed in a morning briefing?
3. What information would you expect from you supervisor during the pre-shift briefing.
4. Have students fill out incident complexity analysis and critique.

Mudd Fire Staff Ride

Stand #1: “Adobe Summit and Point of Origin”

Leader’s Intent: Through active discussion and observation, participants will have a broad understanding of the direction of fire, fire behavior, resources responding, point of origin, trigger points for engagement and subsequent stand locations. Prior to leaving this stand, participants will have a general understanding of the fire’s direction of spread, as well as differences between operations at the point of origin and division Delta.

Logistics: This stand should give the participants a perspective from which to visually assess all key sites of the Mudd Fire while demonstrating how topography, fire activity and weather conditions may have played a role in how later events unfolded.

Stand Location:

40° 54’ 08.34” x 115 52’ 37.78” - Elevation: 6561’

Summary: The Mudd Fire Incident Commander, Elko Helitack, and the Elko District Tatra (1932 at the time and the last available engine in Elko) were working to build and establish an anchor at the point of origin off of State Route 225, northwest of Adobe Summit. A division had been established at the heel, led by the Elko Fire Operations Supervisor and another had been identified (Division Delta) near the head of the fire, southwest of the ridgeline above the Elko “Snow-Bowl”. Multiple resources were responding to Division Delta, including 2 CDF Strike Teams and a BLM Task Force of Engines; other Elko City resources were in and around the Adobe Heights subdivision southeast of the fire. SEATS, Air Attack and the Elko Helicopter were still operational, despite the increasing winds and wind gusts, but visibility on the Northwest part of the fire was diminishing.

Utilizing the information thus far, ask participants to fill out the “Situational Awareness Workbook” and consider some concerns you have at this time. Take this time to discuss some of the Tactical Decision Games and Strategic Talking Points presented below.

Mudd Fire Staff Ride

Stand #1: “Adobe Summit and Point of Origin”/ Suggested Tactical Decision Games (TDGS)

1. Utilize the “Situational Awareness Workbook” to identify your level of SA, identified hazards, and the level of complexity of the incident. Soon you’ll contrast this with more information to gain greater SA and perspective.
2. With the fire coming over the Snow-Bowl ridge while being briefed, what would be some of your concerns or thoughts and what kind of additional information would you request from the Division Supervisor?
3. Considering the Task Force’s location in relationship to the actual fire, what are some tactics that could be employed to assist in suppression?
4. Are there any locations which would make a suitable anchor point, taking into consideration the wind, topography and Rate of Spread?

Stand #1: “Adobe Summit and Point of Origin”/ Suggested Strategic Talking Points (STPS)

1. What are the values at risk?
2. As the Incident Commander of this fire, what would your priorities be?
3. What other human factors, local factors and historical factors might be influencing responding resources’ ability to safely fight this fire? How do we mitigate these factors now?
4. As an Incident Commander, what are your anticipated resource needs from this perspective? How would you set up your command structure at this point?
5. What information would you be seeking as a single resource boss responding to this incident?

Mudd Fire Staff Ride

Situational Awareness Workbook

- NOTES SECTION (FACILITATOR VERBAL DESCRIPTIONS AND QUOTES FROM INVESTIGATION REPORT)
- STAND DESCRIPTION WITH WRITTEN DATA/TIMELINE/DISPATCH COMMUNIQUE FOR THAT STAND
- BULLETS; CRITICAL DECISIONS, MOVEMENTS, ETC (FACILITATOR REMINDERS FOR DISCUSSION POINTS)
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TRACK IMPROVED SITUATIONAL AWARENESS FACTORS

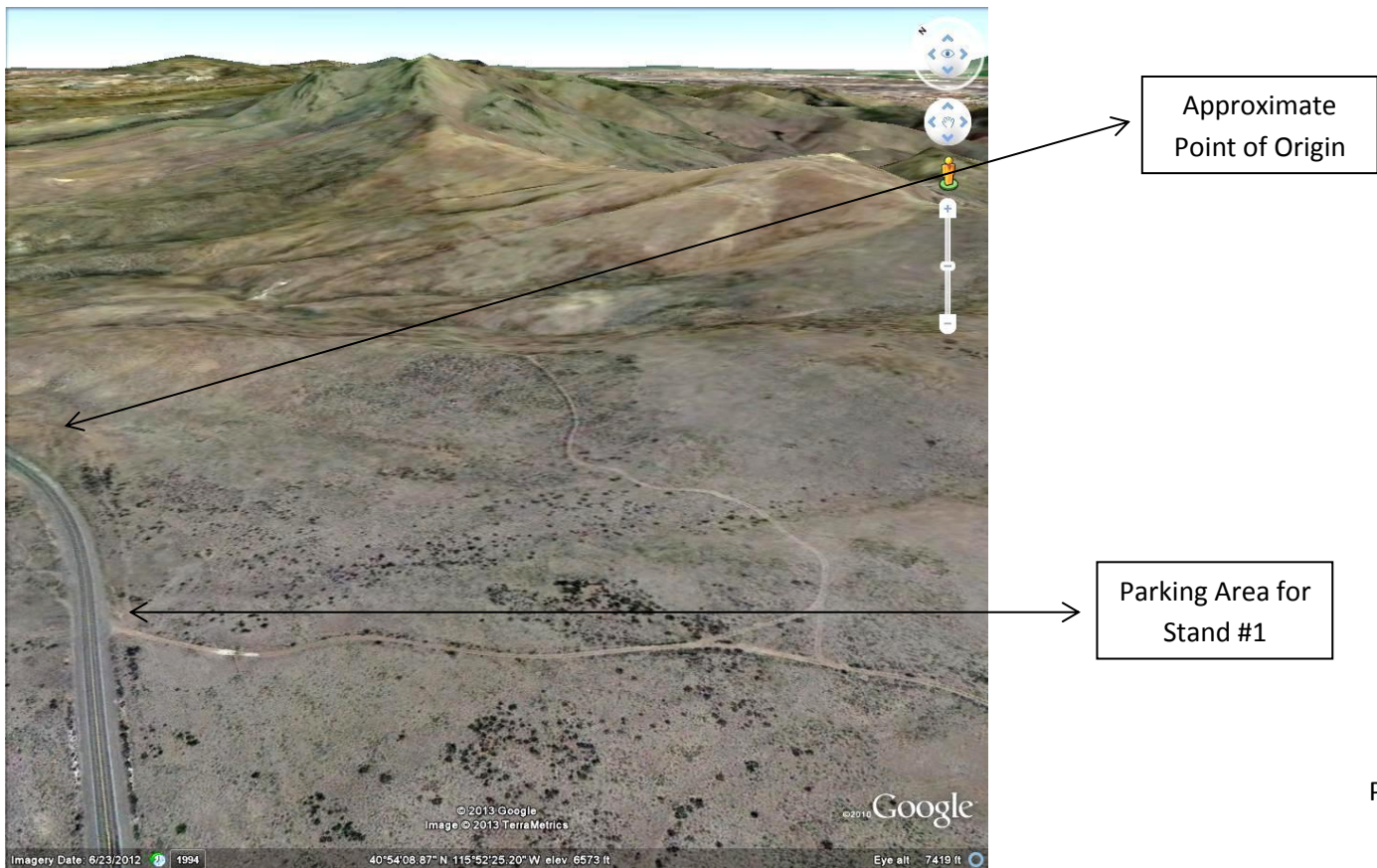
List any pertinent information or observations made in this stand

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Identified Hazards		Mitigations			

Incident Complexity Analysis (Type 3, 4, 5)					
Fire Behavior	Yes	No	Organization (continued)	Yes	No
Fuels extremely dry and susceptible to long-range spotting or you are currently experiencing extreme fire behavior.			Unable to properly staff air operations.		
Weather forecast indicating no significant relief or worsening conditions.			Limited local resources available for Initial Attack.		
Current or predicted fire behavior dictates indirect control strategy with large amounts of fuel within planned perimeter.			Heavy commitment of local resources to logistical support.		
Firefighter Safety			Existing forces worked for 24 hours without success.		
Performance of firefighting resources affected by cumulative fatigue.			Resources unfamiliar with local conditions and tactics.		
Overhead overextended mentally and/or physically.			Values to be protected		
Communication ineffective with tactical resources or dispatch.			Urban interface; structures, developments, recreational facilities, or potential for evacuation.		
Organization			Fire burning or threatening more than one jurisdiction and potential for unified command with different or conflicting management objectives.		
Operations are at the limit of span of control.			Unique natural resources, special designation areas, critical municipal watershed. T&E species habitat, cultural value sites.		
Incident action plans, briefings, etc. missing or poorly prepared.			Sensitive political concerns, media involvement or controversial fire policy		
Variety of specialized operations, support personnel or equipment.			<i>If you have checked "Yes" on 3 or more analysis boxes – consider next level of incident management support.</i>		

Mudd Fire Staff Ride



Mudd Fire Staff Ride

Stand #2: “The Snow-Bowl Y and Division Delta”

Leader’s Intent: Participants will have a clear understanding of the organization that was formed at the Division Delta meeting point (at the end of the Snow-Bowl road) as well as the scouting group that was formed; discussion can be steered towards topics such as chain of command, span of control and human factors influencing situational awareness.

Logistics:

Drive to the “Snow-Bowl Y” on 5th Street North of Elko, NV: N 40° 53’ 31.03” X 115° 49’ 46.07” - Elevation: 5843’

Location: The Snow-Bowl “Y” on 5th Street

Summary: A strike team of engines (E263 out of Kingman, AZ, E1947 out of Carlin, NV, E3943 out of Carson City, NV and E3144 out of Bakersfield, CA), has made their way into a meeting point at the intersection of 5th Street and the road leading into the Elko “Snow-Bowl” (a local seasonal skiing area with ski lift). This area came to be identified at the “Snow-Bowl Y” and is the location of Stand #2. After arriving at the “Y” and speaking with Division Delta, the Engine Boss for 1947 became the Task Force Leader for the group of Engines. Engine 263 is accompanied by a chase vehicle and a scouting unit was formed from the engine bosses (and one crewmember) of E263, E1947, and E3144. While the Engine Bosses depart in the chase vehicle to try to identify options for burning out, the remainder of the Engine Operators and Crewmembers stay at the “Snow-Bowl Y” with the Engine boss of E3943.

After scouting roads near the seismic towers and the “Eight Mile Creek Crossing”, The Task Force Leader (Engine Boss for 3144) calls the engines that are staged at 5th street and Snow-Bowl road to advance towards the scouting party’s position. At this time the fire has split into two prominent heads, one of which is not seen by the scouting party or advancing engines. E3144 takes the lead in advancing towards the scouting party, and they turn left, beginning to advance up the Eight Mile Creek Road. E3144 quickly outpaces the remaining engines, and the scouting party reports that fire is advancing towards the engines location and 5th Street. The three engines located behind E3144 find a turn-around spot and head towards a safety zone adjacent to the Eight Mile Creek Road and 5th Street Junction and in view of the seismic towers to the north. Communication with E3144 had fallen off at this point, and they did not receive (or acknowledge) the call to turn around. Instead, they turned right (north) off of the Eight Mile Creek Road, and advanced up a primitive road towards a ridgeline shared with the seismic towers in line with the advancing fire.

Ask participants to fill out the “Situational Awareness Workbook” and consider some concerns you have at this time. Take this time to discuss some of the Tactical Decision Games and Strategic Talking Points presented below.

Mudd Fire Staff Ride

Stand #2: “The Snow-Bowl Y and Division Delta” (TDGS)

1. Utilize the “Situational Awareness Worksheet” to identify changes in your SA.
2. If you were tasked to be the TFLD of this group of engines, what would your leader’s intent be for this assignment?
3. Address the departure of 3 key leadership positions leaving with the scouting party and discuss the need for thorough briefings, ICT3 structure and positions, and whether or not scouting in this case met any specific goal. Was the absence of the ENGB’s an appropriate action, given the briefing at Division Delta?
4. After hearing the briefing given by Division Delta, what other information would you need as a Crewmember, Single Resource Boss or as the Division relief? Have all the elements of the briefing in the IRPG been met? What are our “Communication Responsibilities” identified in the IRPG? Why is Leaders Intent important in situations like these?
5. It is unclear that there are two prominent heads to this fire and scouting is a necessary means to determine what the fire is doing. In the case of the engines in this Task Force there is only one vehicle small enough to conduct the scouting mission (E 263). While it is important to scout line and assess options, when is it appropriate to leave our crewmembers behind without supervision? Does everyone have the information they need to disengage and exit this part of the fire in the absence of their supervision/leadership?
6. What alternatives, if any, are in place for engaging this fire?

Stand #2: “The Snow-Bowl Y and Division Delta” (SDPS)

1. Division Delta did not have the ability to communicate with Air Resources and incoming resources had a passcode on their radios prohibiting them from programming over existing frequencies. How do we mitigate frequency issues before the start of fire season? What can we do to ensure that off-district resources have a clear radio plan? Can anyone identify historical communication issues, locally or on other districts? How were those mitigated?
2. When multiple resources from different jurisdictions arrive to an emerging incident, they bring with them their own set of radio programs; how can we as IC’s, Division Supervisors, FOS’s, AFMO’s or FMO’s ensure that there is a sound communication link between resources on our district? How will we maintain our process? At what point do we “disengage” due to communication barriers?
3. Discuss the value of staging areas with participants, especially considering that Elko was inundated with resources demobilizing from other incidents and arriving as support.

- NOTES SECTION (FACILITATOR VERBAL DESCRIPTIONS AND QUOTES FROM INVESTIGATION REPORT)
- STAND DESCRIPTION WITH WRITTEN DATA/TIMELINE/DISPATCH COMMUNIQUE FOR THAT STAND
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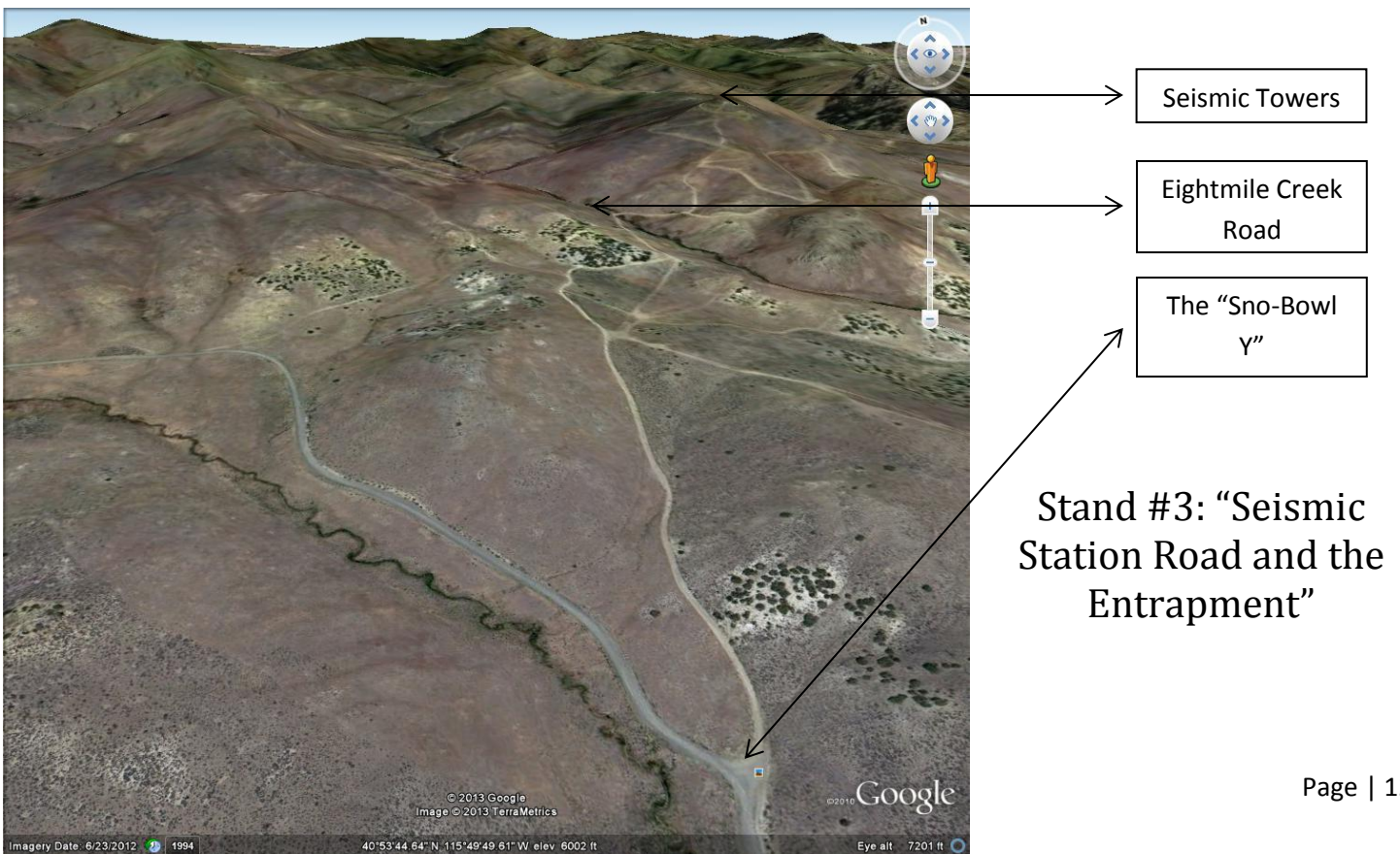
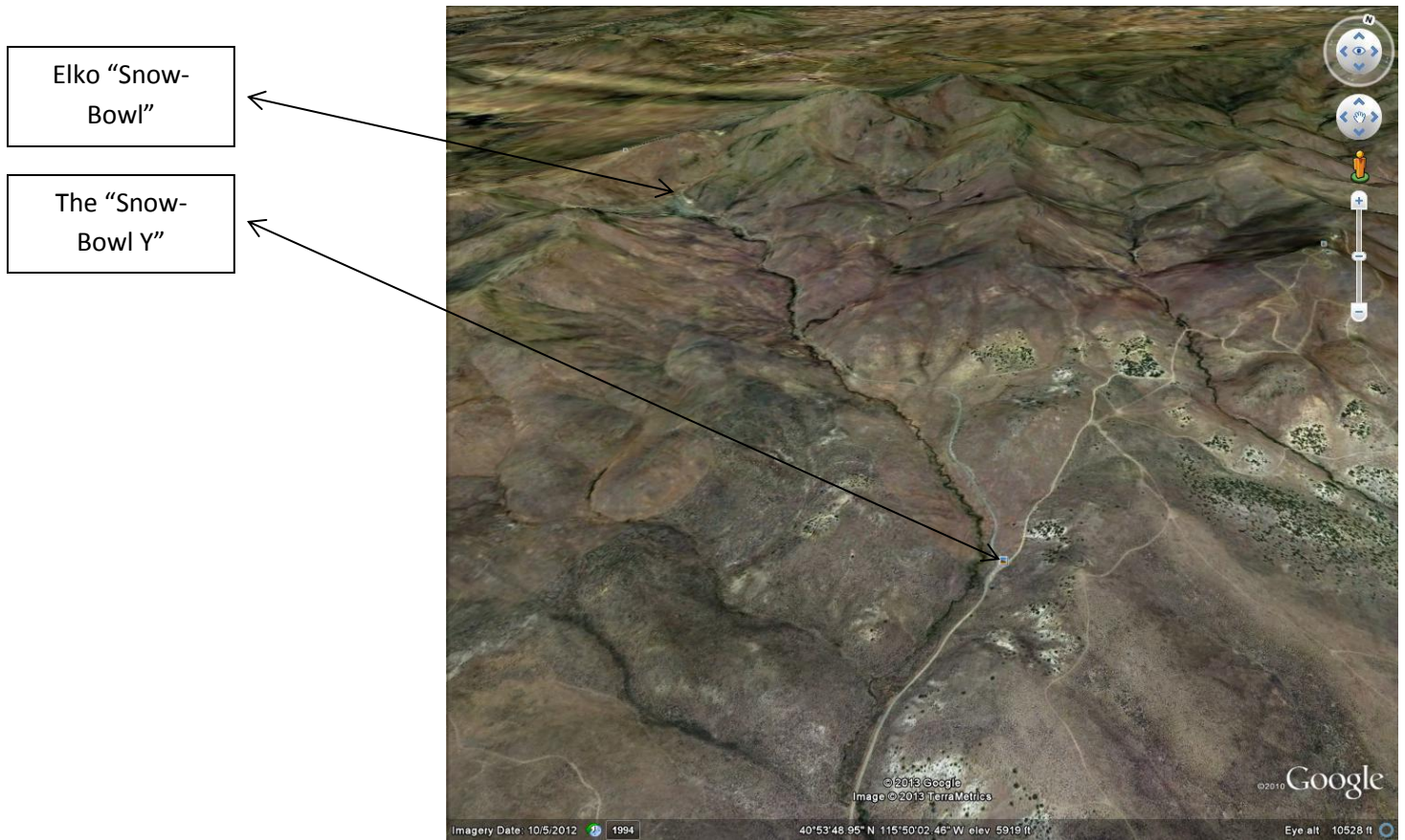
TRACK IMPROVED SITUATIONAL AWARENESS FACTORS
List any pertinent information or observations made in this stand

Identified Hazards		Mitigations	

Incident Complexity Analysis (Type 3, 4, 5)

Fire Behavior	Yes	No	Organization (continued)	Yes	No
Fuels extremely dry and susceptible to long-range spotting or you are currently experiencing extreme fire behavior.			Unable to properly staff air operations.		
Weather forecast indicating no significant relief or worsening conditions.			Limited local resources available for Initial Attack.		
Current or predicted fire behavior dictates indirect control strategy with large amounts of fuel within planned perimeter.			Heavy commitment of local resources to logistical support.		
Firefighter Safety			Existing forces worked for 24 hours without success.		
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Overhead overextended mentally and/or physically.			Values to be protected		
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Organization			Fire burning or threatening more than one jurisdiction and potential for unified command with different or conflicting management objectives.		
Operations are at the limit of span of control.			Unique natural resources, special designation areas, critical municipal watershed. T&E species habitat, cultural value sites.		
Incident action plans, briefings, etc. missing or poorly prepared.			Sensitive political concerns, media involvement or controversial fire policy		
Variety of specialized operations, support personnel or equipment.			<i>If you have checked “Yes” on 3 or more analysis boxes – consider next level of incident management support.</i>		

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Leader's Intent: Participants will walk this stand through and to the deployment site, discussing the eighteen watch outs, fire orders, LCES and human factors influencing situational awareness.

Logistics: Drive to the ridge top where the seismic towers are located and park near the northern end of the road that loops towards the ridgeline, and identify a place to park. Hike to the entrapment site. We will be approximately ½ mile from the vehicles, so consider taking some water. If you would like, put on your fire gear and make your way to the deployment site to try to understand the situation from the perspective of those who had to deploy.

Location: Communication Site Road (Ridge Top) → E-3144 → Entrapment Site

Stand #3 Start/End: 40° 54' 48.17" X 115° 49' 04.65" – Elevation: 6625

E-3144s Final Stopping Point:	40 55' 10.41" x 115 49' 20.01"
Dropped Gear:	40 54' 57.80" x 115 49' 05.99"
Deployment (ENOP):	40 54' 57.12" x 115 49' 04.91"
Deployment (FFT2):	40 54' 52.21" x 115 48' 56.46"

Summary: E 3144 found an alternate road that led to the top of a ridge. The two track road they selected quickly flattened one of their rear dual tires and damaged the rim. Visibility was disappearing due to smoke and the engine continued on to the top of the ridge, despite one flat tire. Upon reaching the ridge top the engine slid off the road and became high centered.

In the meantime, the remaining task force of engines returned to a safety zone just below the seismic towers and adjacent to the Eight Mile Creek turn off; the scouting party continued up the Eight Mile Creek Road to a multiple road junction that would suffice as their safety zone as the head of the fire passed by and towards Kittridge Canyon.

"I call Fry asking for an update, hoping he had the engine in the safety zone. He responded and said they now had a flare rear dual tire . . . He said basically that he had nowhere to go (sic)" –

Captain 3144

With fire quickly approaching, the members of E 3144 decided to burn out around their engine, with the intent of applying water with the hardline to create a black line around their engine. They quickly abandoned this idea and the engine, and began making their way up the ridge towards the seismic towers (about a mile away). After making their way about a third of a mile up the road the Engine Operator made the decision that they needed to deploy their shelters. The two were separated by about 800 feet when they deployed.

Please discuss the actions of the task force and subsequent deployment with facilitator led questions. Consider current protocols that are taken for burn injuries, and consider communication barriers, and human factors which may have contributed to this entrapment.

Ask participants to fill out the "Situational Awareness Workbook" and consider some concerns you have at this time. Take this time to discuss some of the Tactical Decision Games and Strategic Talking Points presented below.

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Mudd Fire Staff Ride

Stand #3: “Communication Site Road and the Entrapment”: Tactical Decision Games (TDGS)

1. What is a “Safety Zone”? How is it different than a “Deployment Zone”? What do we need to do in consideration of “Safety Zones”?
2. The IRPG lists 5 “Stress Reactions” on page xi, discuss these stress reactions and where they may have started to generate if they were present.
3. What can we do to maintain SA in a dynamic and changing physical and mental environment? Are there tools available to keep ourselves in check?
4. The IRPG talks about “Last Resort Survival” on pages 28 and 29, because we all know that there is a remote possibility that we will have to use our fire shelters in extenuating circumstances. Review the bullet points of “Last Resort Survival” and imagine yourselves in the position to deploy. (Note, the engine was virtually undamaged after the fire passed by, and the engine was still idling 8 hours later, discuss utilizing vehicles as shelter from an oncoming fire in some situations, when is it appropriate? What can be done to further secure a vehicle in this fuel type?)
5. What would you do next? How would you determine the appropriate time to exit your shelter? And, what would be your primary concerns after exiting?

Stand #3: “Communication Site Road and the Entrapment”: Strategic Discussion Points (SDPS)

1. As an IC, DO or Agency Administrator, what are your communication expectations, after an event like this?
2. Discuss the history, context and process for burn injury protocol in the IRPG.
3. What steps would you be taking to ensure the appropriate care, treatment and follow up treatment of the individuals that had to deploy?
4. What can we all review prior to fire season to ensure seamless treatment of individuals that have been exposed to smoke inhalation or burn injuries? Are our medical plans updated annually? If so, do you know where to locate them?
5. Considering the potential traumatic effect this may have had on the members of E 3144, what other things might you as a Manager, consider employing?

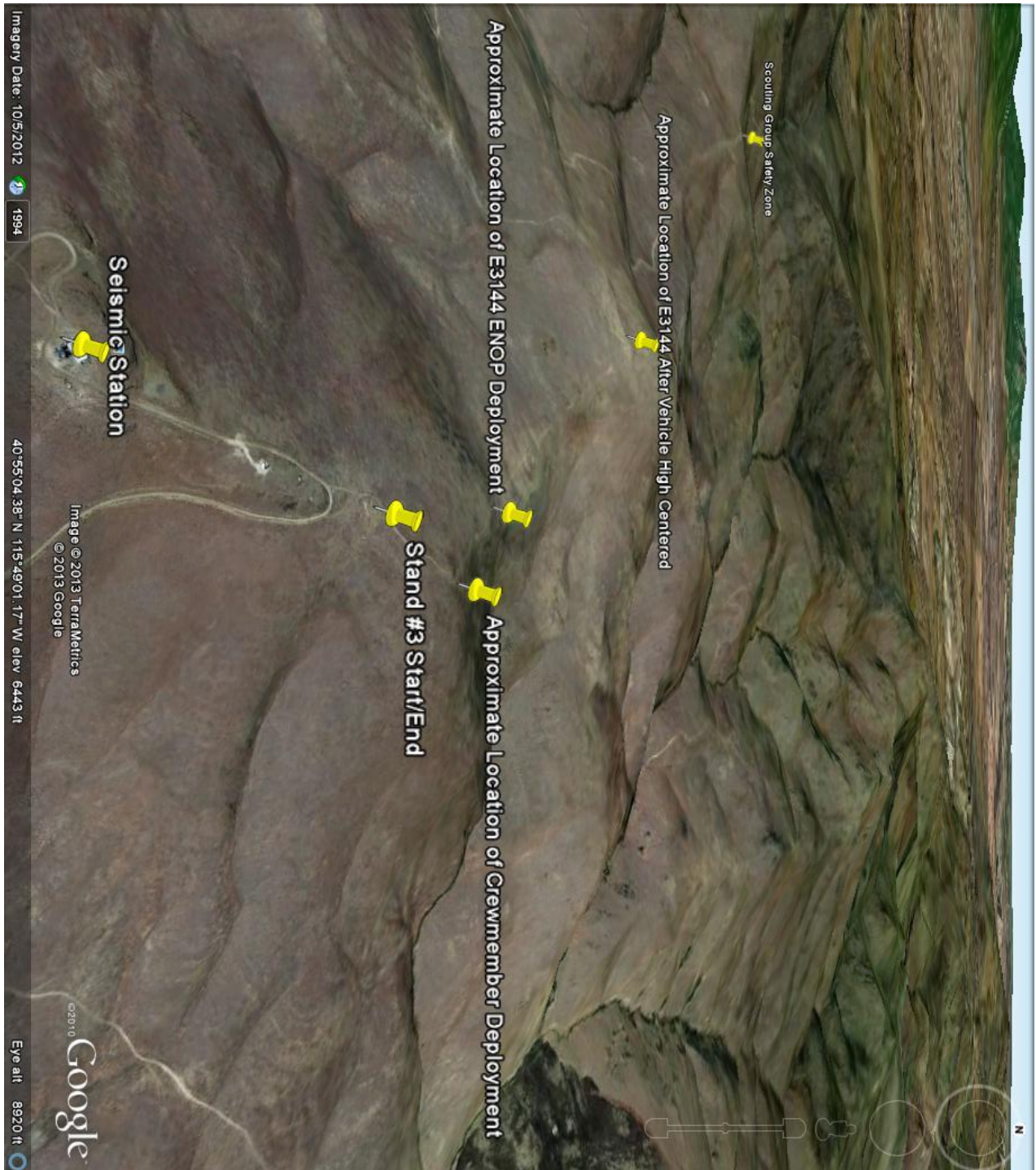
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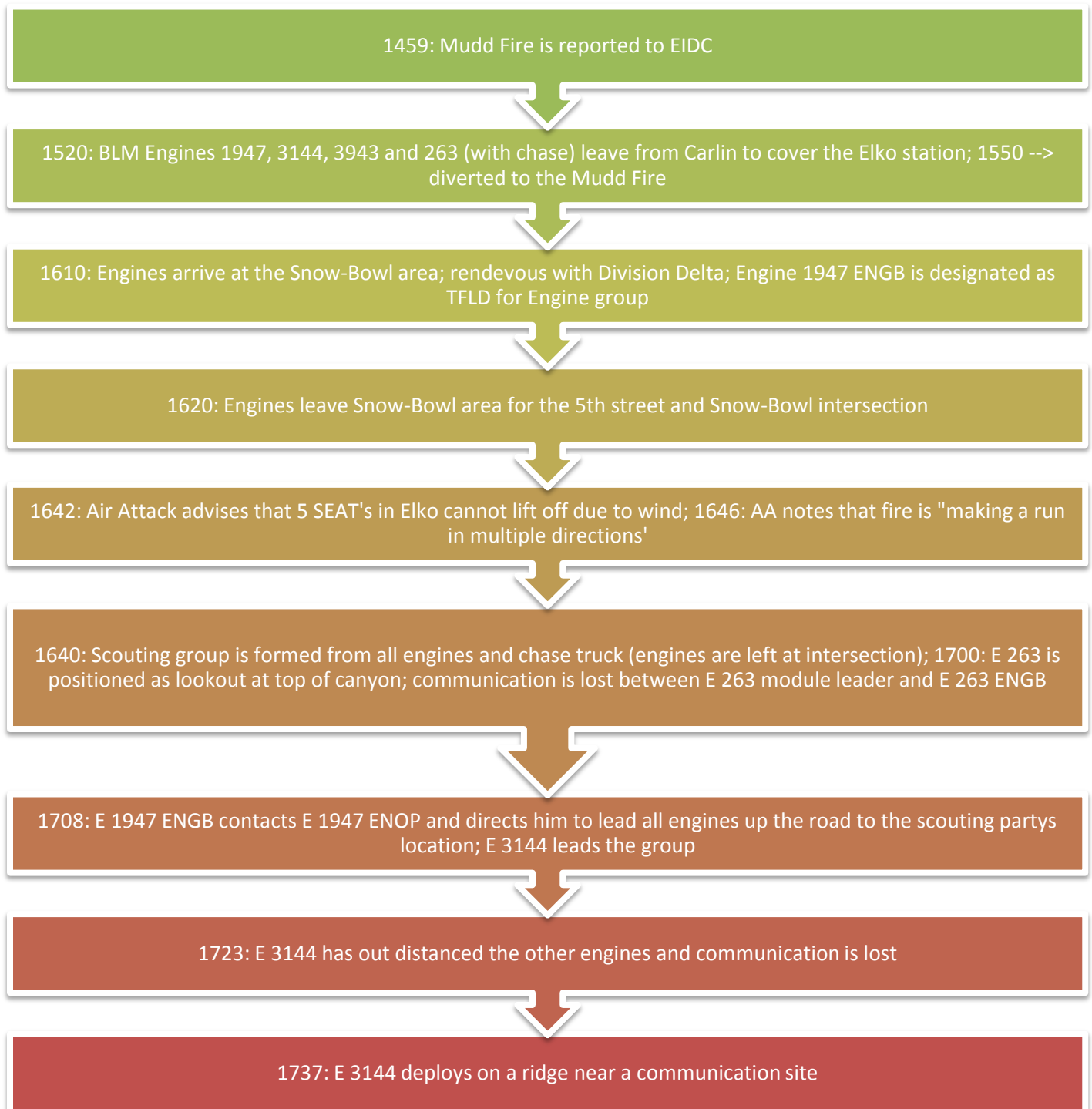


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Compressed timeline taken from the Accident Investigation



Mudd Fire Staff Ride

INTEGRATION/AAR/LESSONS LEARNED

This Stand is not “formally” built. Please use the attached Evaluation for specific recommendations on how to improve the overall Staff Ride outline and execution. Utilize this notes section for your benefit and reference. Interviews may be attached after print and will be handed out as an Appendix and ought to be referenced for use in this Stand.

Notes:

Mudd Fire Staff Ride

Evaluation (Please submit to Facilitator's at the completion of today's Staff Ride):

**Keep in mind this is Staff Ride "In Progress" and all input is valuable in improving future facilitation.*

Were the Participant Guides sufficient? Do you have any suggestions on additions, omissions or areas in the guide which can be improved?

Was the Facilitation of today's Staff Ride appropriate? Did the facilitator's adequately foster a "lessons learned" environment?

Was the level of pre-course work too difficult? Too easy?

Did the logistics and overall outline of today's Staff Ride promote a lessons learned environment safely?

Additional Comments:

Mudd Fire Staff Ride Participant Roster	
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Facilitated by:

Date: _____

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